



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/000,330	05/20/1998	TORU NAKAMURA	514420-3596	5116

23416 7590 05/09/2003

CONNOLLY BOVE LODGE & HUTZ, LLP
1220 N MARKET STREET
P O BOX 2207
WILMINGTON, DE 19899

EXAMINER

DOTE, JANIS L

ART UNIT	PAPER NUMBER
1756	31

DATE MAILED: 05/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	09/000,330	Applicant(s)	NAKAMURA et al
Examiner	J. DOTE	Group Art Unit	1756

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

Responsive to communication(s) filed on 3/10/03

This action is FINAL.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

Claim(s) 16 - 19, 21 - 27 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

Claim(s) 16 - 19, 21 - 27 is/are rejected.

Claim(s) _____ is/are objected to.

Claim(s) _____ are subject to restriction or election requirement

Application Papers

The proposed drawing correction, filed on _____ is approved disapproved.

The drawing(s) filed on _____ is/are objected to by the Examiner

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

All Some* None of the:

Certified copies of the priority documents have been received.

Certified copies of the priority documents have been received in Application No. _____.

Copies of the certified copies of the priority documents have been received
in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

Information Disclosure Statement(s), PTO-1449, Paper N (s). _____ Interview Summary, PTO-413

Notice of Reference(s) Cited, PTO-892 Notice of Informal Patent Application, PTO-152

Notice of Draftsperson's Patent Drawing Review, PTO-948 Other _____

Office Action Summary

1. A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicants' submission filed on Mar. 10, 2003, has been entered.

2. The examiner acknowledges the amendments to claims 17, 18, 19, and 22 filed in Paper No. 25 on Dec. 2, 2002, which was entered on the filing of the RCE. Claims 16-19 and 21-27 are pending.

The clean copy of amended claim 17 mis-labeled the claim as claim 18. The clean copy labeled two claims as claim 18. The mis-labeled claim was renumbered as claim 17 under 37 CFR 1.124, so that the clean copy corresponds to the marked-up version of amended claim 17.

3. The objections to the specification set forth in the office action mailed Jul. 24, 2002, Paper No. 22, paragraph 3, have been withdrawn in response to the amendment to the specification at page 3, line 11, filed in Paper No. 25.

The rejections of claims 17, 18, 19/(17,18), 21/(17,18), 22/(17,18), 23/(17,18), 24/(17,18), and 25/(17,18) under 35 U.S.C. 112, second paragraph, set forth in Paper No. 22, paragraph 5, have been withdrawn in response to the amendments to claims 17-19 and 22, and the amendment to the specification at page 3, line 11, filed in Paper No. 25.

The rejections of claims 17, 18, 19/(17,18) and 21-25/(17,18) under 35 U.S.C. 112, first paragraph, set forth in Paper No. 25, paragraph 7, have been withdrawn in response to the amendments to claims 17 and 18, and the amendment to the specification at page 3, line 11, filed in Paper No. 25.

4. The amendment filed in Paper No. 25 on Dec. 2, 2002, is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

(1) The amendment at page 3, line 11, of the specification, adding the disclosure that the intrinsic viscosity "is measured in decalin at 135°C," lacks antecedent basis in the originally filed specification. The originally filed specification does not disclose any conditions under which the intrinsic viscosity is determined. The working examples merely recite the values of

intrinsic viscosity. Accordingly, the originally filed specification does not provide an adequate written description that the intrinsic viscosity is measured in decalin at 135°C, as now disclosed in the amendment to the specification.

(2) The amendment at page 3, line 11, of the specification, adding the disclosure describing the conditions set forth in the German standard DIN 53461-B (January 1987) for determining values of the heat-distortion temperature (HDT), lacks antecedent basis in the originally filed specification. The originally filed specification does not define the German standard DIN 53461-B, or the experimental conditions under which the HDT is determined. Nor does the originally filed specification disclose the date of the particular version of the standard that was used.

Applicants are required to cancel the new matter in the reply to this Office Action.

Applicants' arguments filed in Paper No. 25 have been fully considered but they are not persuasive.

(1) Applicants assert that support for the definition of intrinsic viscosity "as measured by decalin at 135°C" is found in the US patents, in particular US 6,210,852 (US'852), provided by applicants in Appendices 2 and 3 attached to Paper No. 25. Applicants further assert that the values reported in the instant application "can only be measured in decalin at 135°C."

Upon review of the originally filed specification, applicants' "definition" of intrinsic viscosity would not have been obvious to a person having ordinary skill in the art. As discussed in the objection in item (1) above, the originally filed specification is silent on the conditions under which the intrinsic viscosity is determined. There is no disclosure in the originally filed specification to support applicants' allegation that the intrinsic viscosity disclosed in the specification is determined in decalin at 135°C.

The disclosures in the US patents provided by applicants are not part of the originally filed specification. Furthermore, US 6,210,852 does not show that "the same polymer defines that the intrinsic viscosity is measured at 135°C in decalin" as alleged by applicants in Paper No. 25, page 11, lines 20-22. The cyclic olefins disclosed in US 6,210,852 (US'852) do not appear to be same as those disclosed in the instant application. US'852 exemplifies polyolefin polymers having viscosity numbers of 130 and 17 dl/g. See US'852, col. 12, lines 22 and 33. US'852 does not report the intrinsic viscosity values of said copolymers. The instant specification reports that the commercially available polyolefins it used have intrinsic viscosities of 0.19, 0.8, or less than or equal to 0.25 dl/g. See the specification, page 11, lines 13-16. In addition, US'852's copolymers have Tg's and molecular weights that differ from those polymers used in the

instant application. US'852 also does not report the heat distortion temperatures (HDT) of the copolymers. Thus, there is no basis to conclude that US'852 shows that the intrinsic viscosity disclosed in the instant specification was determined in decalin at 135°C. Moreover, the prior art shows that the intrinsic viscosity of olefins need not necessarily be determined in decalin at 135°C, as alleged by applicants. For example, US 5,717,039 at col. 22, lines 4-8, discloses that usually ethylene alpha-olefin polymers possess an intrinsic viscosity at 135°C in TETRALIN (i.e., tetrahydronaphthalene, see Grant & Hackh's Chemical Dictionary, fifth edition, page 582) of between about 0.025 and about 0.6 dl/g. Also see, US 5,039,766, col. 6, lines 38-39, and US 5,759,469, col. 4, lines 65-66. US 3,922,256 at col. 1, lines 25-27, reports the intrinsic viscosity of an alpha olefin polymer determined in toluene at 25°C. US 5,179,156 at col. 3, lines 61-62, reports the intrinsic viscosity of an ethylene propylene copolymer determined in xylene at 70°C. Thus, the values of intrinsic viscosity disclosed in the instant specification do not necessarily have to be those measured only in decalin at 135°C, as alleged by applicants. Accordingly, the disclosure in the originally filed specification does not provide an adequate antecedent basis for applicants' alleged definition.

(2) Applicants in Paper No. 25, page 10, lines 11-13, state that DIN 53461-B of January 1987 "was the revision in place when

applicants filed this application. It is clear that this revision would be one applicable unless the applicants stated that the earlier revision was applicable."

However, as discussed in the objection in item (2) above, there is no disclosure in the originally filed specification that would lead a person having ordinary skill in the art to the conclusion that the version of the German DIN standard disclosed in the specification was that of January 1987. Nor is there any evidence on the present record that shows that the January 1987 version was the version currently used at the time the application was filed. The instant application (i.e., the PCT application) was filed on Jun. 29, 1996, which claimed the benefit of foreign priority to Aug. 2, 1995 and Dec. 29, 1995. There is a difference of more than 8 years between January 1987 and the earliest foreign priority date of December 1995. Applicants have not provided any evidence showing that the January 1987 was not replaced with a later version prior to the earliest filing of the instant application.

5. The examiner has determined that term "heat roller fixing means" recited in instant claims 16-18 and 26 is not covered by the 35 U.S.C. 112, sixth paragraph because such "means for" are modified by sufficient structure, material, or acts for achieving the specified function. See MPEP 2181.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 22/(16) is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 22/16 is indefinite because the phrase "said polyolefin resin with a cyclic structure having an intrinsic viscosity . . . and a weight average molecular weight of 15,000 or more, as measured by GPC" (emphasis added) lacks antecedent basis claim 16. Claim 16 does not recite the presence of the particular polyolefin recited in instant claim 22, but merely recites that the toner comprises a polyolefin copolymer resin having a cyclic structure derived from an alpha-olefine, an alicyclic compound, and, optionally, a diene monomer.

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 16, 17, 18, 19/(17,18), 21-25/(16,17,18), 26, and 27 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

(1) Claims 16, 17, 18, 19/(17,18), 21-25/(16,17,18), 26, and 27 recite the component "a heat roller fixing means." The originally filed specification does not provide an adequate written of such a component. The specification merely discloses "a heat roller type copier or printer." See for example, the specification, page 1, lines 5-6, page 3, line 1, and page 4, lines 18-19. Thus, the specification does not provide an adequate written description of "a heat roller fixing means" as recited in the instant claims.

(2) Instant claims 17 and 18 and claims dependent thereon recite a low viscosity resin having a "heat distortion temperature (HDT) by DIN 53461-B (January, 1987) of less than 70°C" and a high viscosity resin having a "HDT of 70°C or more." Claim 22 recites a polyolefin resin with a cyclic structure having a "heat distortion temperature (HDT) by DIN 53461-B (January, 1987) of 70°C or more." The originally filed specification does not provide an adequate written description of the standard DIN 53561-B as the version of January 1987. The

originally filed specification was silent with respect to the version used. See for example, page 3, lines 6-7.

(3) Instant claims 17 and 18 and claims dependent thereon recite a low viscosity resin having an "intrinsic viscosity (i.v.) of less than 0.25 dl/g," and a high viscosity resin having an "i.v. of 0.25 dl/g or more." Claim 22 recites a polyolefin resin with a cyclic structure having an "intrinsic viscosity of 0.25 dl/g or more." The amendment to the specification at page 3, lines 11, defines the intrinsic viscosity as that "measured in decalin at 135°C." The originally filed specification does not provide an adequate written description of such an intrinsic viscosity. The originally filed specification does not disclose any conditions under which the intrinsic viscosity is determined. The working examples merely recite the values of intrinsic viscosity. Accordingly, the originally filed specification does not provide an adequate written description that the intrinsic viscosity is measured in decalin at 135°C, as now recited in the instant claims.

(4) Claim 22/(16,17,18) recite that the binder resin comprises a polyolefin resin having a cyclic structure having "an intrinsic viscosity (i.v.) of 0.25 dl/g or more . . . in a proportion not more than 50% by weight based on the binder resin" (emphasis added). The originally filed specification does not provide an adequate written description of the amount of "not

more than 50% by weight." The originally filed specification at page 3, lines 10-11, discloses the amount of "less than 50% by weight." The amount of "not more than 50% by weight" recited in instant claim 22 includes the amount of 50% by weight, which is outside the scope of the originally disclosed amount.

Applicant's arguments filed in Paper No. 25 have been fully considered but they are not persuasive. Applicants' arguments regarding the rejections in items (2) and (3) above have been addressed in paragraph 4, supra.

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 16, 23/16, 24/16, and 25/16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 2-184864 (JP'864) (see PTO translation for cites) combined with page 13 of Grant & Hackh's Chemical Dictionary, fifth ed., and Diamond, Handbook of Imaging Materials, page 169.

JP'864 discloses a toner that comprises a colorant and a binder resin comprising a "cyclopentadiene-type" copolymer (which is a polyolefin resin having a certain cyclic structure). Translation, page 2, lines 8-14; Working Examples 8-24 at pages 20-22; and JP'864, page 631. The cyclopentadiene-type copolymer can be a copolymer obtained from dicarboxy-

diallyltricyclo(5,2,1,0²⁶)-decane ("DDD"), lauryl methacrylate, methacrylic acid, and divinylbenzene. Translation, Polymerization Example 2 at pages 7-8. The copolymer obtained from DDD comprises carboxy groups, thereby meeting the limitations of claim 24/16. DDD comprises saturated tricyclo(5,2,1,0²⁶)-decane and allyl groups, thereby meeting the limitation of "alicyclic compound having a double bond" recited in instant claim 16. Divinyl benzene is a diene monomer. Methacrylic acid is an alpha olefin acid. See Grant & Hackh's Chemical Dictionary, fifth ed., page 13. Thus, the copolymer comprises saturated tricyclo(5,2,1,0²⁶)-decane groups and carboxy groups, and meets the limitations of claims 16 and 24/16. The copolymer is also crosslinked by divinyl benzene, a diene, and therefore meets the limitation of claim 25/16.

JP'864 discloses that its toner can be fixed by heating and that it prevents toner offset. Translation, page 4, line 24, and page 5, line 7. JP'864 further discloses that since the cyclopentadiene-type polymer has a large number of allyl groups, the allyl groups can readily undergo a polymer radical reaction. Thus, the toner can be fixed by ultraviolet-cure. In other words, the cyclopentadiene polymer can be crosslinked. JP'864 discloses that its toner provides images with increased density, and has good resolving power and fixing properties. Translation, page 4, lines 17-25; page 5, lines 16-25.

JP' 864 does not exemplify a toner that comprises a charge controlling agent. However, JP' 864 teaches that a polarity-controlling agent, i.e., a charge control agent, can be incorporated in its toner. Translation, page 6, lines 21-22. The use of charge control agents is well-known in the art. Diamond discloses that it is known to add charge control additives to toners when the pigment blended into the polymer resin does not give an adequate charge level or rate of charging. This applies to both negative and positive charging applications. Diamond further discloses a number of known charge control agents, including nigrosine and metal complexes, that effectively give the toner a positive or negative charge. Diamond, page 159, section 4.2.3.

It would have been obvious to a person having ordinary skill in the art, in view of the teachings of JP' 864 and Diamond, to add a charge control agent to the toner disclosed by JP' 864, because that person would have had a reasonable expectation of successfully obtaining a positively or negatively charged toner having an adequate charge level and rate of charging that provides toner images with increased density, and good resolving power and fixing, as taught by JP' 864.

Applicants' arguments filed in Paper No. 25 have been fully considered but they are not persuasive.

Applicants assert that the term "alpha olefin" is recognized by the olefin art as having the following formula $\text{CH}_2=\text{CHR}$ where R

is hydrogen or alkyl. Applicants provide several US patents that define alpha olefins in Appendix 4. Applicants argues that JP'864 does not disclose the alpha olefins as is claimed by applicants.

However, there is no disclosure in the instant specification that provides antecedent basis for defining the term α -olefin, recited in the instant claims, by the formula $\text{CH}_2=\text{CHR}$, where R is hydrogen or alkyl, as alleged by applicants. The US patents provided by applicants define the term "alpha olefin" as used in their respective inventions. For example US 6,171,994 B1 at col. 23, lines 21-29, discloses that "[n]o particular restriction is put on the kind of olefins, but α -olefins having 2 to 20 carbon atoms are preferable. Examples of α -olefins include ethylene . . ." (emphasis added). US 5,478,890 at col. 3, lines 47-52, discloses that "[t]he α -olefins employable in the invention are α -olefins of 2-20 carbon atoms . . ." (emphasis added). US 5,478,922 at col. 3, lines 29-34, discloses that "[t]he preferred C3 to C8 alpha olefins are propylene . . . and octene-1" (emphasis added). The instant specification does not define the term " α -olefin." As discussed in the rejection, the textbook Grant & Hackh's Chemical Dictionary, fifth edition, page 13, defines methacrylic acid as an alpha olefin acid. In addition, the instant claims do not exclude JP'864's copolymer. Instant claim 16 merely recites "a copolymer derived from an

alpha-olefin, an alicyclic compound having a double bond and, optionally a diene monomer." The instant specification does not define the terms "alpha olefin" or "alicyclic compound having a double bond." The specification at page 4, lines 31-34, merely discloses "a copolymer of an alpha olefin, such as ethylene, propylene or butylene, with an alicyclic compound having a double bond, such as norbornene or cyclohexene." Instant claim 16 and the claims dependent thereon are not limited to copolymers made from those compounds. The term "alicyclic compound" is usually defined as a compound containing a carbon containing ring whose properties are aliphatic rather than aromatic. See Grant and Hackh's Chemical Dictionary, fifth edition, page 22. As discussed in the above rejection, JP'864's copolymer is within the limitations recited in instant claims 16, 24/16, and 25/16. The evidence presented in the rejection and above clearly shows that JP'864's copolymer is within the limitations recited in the instant claims.

Accordingly, for the reasons set forth above and in the rejection, the instant claimed toner is rendered obvious over the prior art.

10. Claims 16, 21/16, 23/16, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,817,843 (Masuda) combined with US 5,741,617 (Inaba) and US 5,179,171 (Minami), as

evidenced by the Aldrich Catalog, page 1063, and Polymer Technology Dictionary, page 487.

Masuda discloses a toner that comprises a colorant, a quinizarin dye, and a binder resin. Col. 24, lines 57-62, and examples 63-88 at col. 50. Masuda discloses that said toner provides clear color lightfastness images free from fogging. Col. 50, lines 32-44.

Masuda discloses that the toner can further comprise an "antistatic agent" such as metals of salicylic acid, organic salts of boron, quaternary ammonium compounds, metal complexes of imidazole, and pyridinium salts. Col. 25, lines 33-39. Masuda discloses that said antistatic agents control the electrification of the toner without affecting the color tone of the toner. Col. 25, lines 29-32. Masuda does not identify the antistatic agents as charge control agents as recited in the instant claims. However, the Masuda's antistatic agents have the same function as charge control agents, namely, to control the charge level, i.e., the electrification, of the toner. Inaba identifies metals of salicylic acid, boron compounds, quaternary ammonium compounds, and imidazole compounds as charge control agents. Col. 13, lines 51-60. Accordingly, the antistatic agents disclosed by Masuda are charge control agents. The burden is on applicants to prove otherwise. In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

Masuda does not disclose that the binder resin is a polyolefin resin having a cyclic structure as recited in the instant claims. However, Masuda discloses that the binder resin can be any binder resin known in the art. Col. 24, lines 61-62. Masuda further discloses that the binder resin can be alicyclic hydrocarbon resins. Col. 25, lines 23-24.

Minami discloses a random copolymer resin having a cyclic structure that is within the compositional limitations recited in the instant claims. Minami discloses that the low molecular weight random copolymers can be used as electrophotographic toners. Col. 15, lines 58-59, and col. 16, line 2. The random copolymer is obtained from ethylene and at least one cycloolefin, such as bicyclo[2,2,1]hept-2-ene, which is incorporated in the polymer chain without ring opening. Col. 4, line 30, to col. 8, line 5, and especially col. 8, line 50. The random copolymer comprises saturated alicyclic groups, and is thus within the compositional limitation recited in claim 16. Ethylene and the cycloolefin are within the limitations recited in claims 16 and 21/16. A copolymer of ethylene and bicyclo[2,2,1]hept-2-ene, which is another name for norbornene (see Aldrich Catalog, page 1063), meets the copolymer recited in instant claim 26. Minami discloses that said copolymer is formed by copolymerizing ethylene and the cycloolefin in the presence of a catalyst. The catalyst comprises a soluble vanadium compound and an aluminum

alkyl compound. Col. 8, line 11, to col. 9, line 50. Such a catalyst is recognized as a Ziegler-Natta catalyst system. See Polymer Technology Dictionary, page 487. Thus, Minami's copolymer is made by a Ziegler catalyst as recited in instant claim 27.

Minami teaches that its random copolymers have excellent transparency, thermal resistance, dielectric properties, and mechanical properties. Col. 4, lines 16-21.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Minami, to use Minami's random copolymer obtained from ethylene and a cycloolefin, such as norbornene, as the binder resin in the toner disclosed by Masuda, because that person would have had a reasonable expectation of successfully obtaining an electrophotographic color toner having the properties disclosed by Masuda and excellent transparency.

The recitation in instant claims 16 and 26 that the toner can be used for "developing an . . . image . . . wherein the . . . image is fixed using a heat roller fixing means" is a recitation of intended use, and does not distinguish the toner recited in the instant claims from the toner rendered obvious over the cited prior art. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to

patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Applicants' arguments filed in Paper No. 25 have been fully considered but they are not persuasive.

Applicants argue that the Masuda does not recognize the advantages of applicants' claimed binder resin. Applicants assert that "there is no reason for one to selectively pick and choose the applicants['] claimed invention." Applicants argue that there is no motivation to use a cyclic olefin, as recited in the instant claims, in Masuda's toner.

However, the reasons for combining the references do not have to be those of applicants. As discussed in the rejection, the references do provide reason, suggestion, and motivation, to use Minami's cyclic olefin copolymer as the toner binder resin in Masuda's toner. Masuda discloses that the toner binder resin can be any well-known toner binder resin in the art. Masuda discloses that such resins include "alicyclic hydrocarbon resins." Alicyclic hydrocarbon resins encompass Minami's cyclic olefin copolymers. Minami teaches cyclic olefin copolymers, which meet the cyclic polyolefin recited in the instant claims. Minami discloses that its copolymers have excellent thermal

resistance in addition to excellent dielectric properties, mechanical properties, and transparency. Minami teaches that said copolymers can be used in electrophotographic toners. Accordingly, Minami provides reason, suggestion, and motivation to a person having ordinary skill in the art to use its cyclic olefin copolymer as the toner binder resin in Masuda's toner.

Accordingly, for the reasons set forth above and in the rejection, Masuda combined with the teachings in Inaba and Minami renders obvious the instant claimed toner.

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 16, 21/16, 22/16, 23/16, 24/16, 25/16, and 26 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over

claims 35-57 of copending Application No. 09/331,729
(Application'729).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Although the conflicting claims are not identical, they are not patentably distinct from each other, because the claims now recited in Application'729 render obvious the instant claimed toner.

Application'729 claims a toner comprising a colorant, a charge controlling agent, and a binder resin comprising at least one polyolefin resin having a cyclic structure wherein the resin comprising a first resin having a number average molecular weight (Mn) of 7,500 or less and a glass transition temperature of lower than 70°C, and a second resin having an Mn of 7,500 or more. See reference claims 35, 48, and 49. Reference claim 52, which depends on reference claim 49, requires that the polyolefin having a cyclic structure be a copolymer of an alpha olefin, i.e., ethylene, propylene, or butylene, and a "cyclic compound having a double bond," i.e., cyclohexene, norbornene, tetracyclododecene, or dicyclopentadiene. The copolymer is within the compositional limitations recited in instant claims 16, 21, and 26. Reference claim 41, which depends from reference claim 35, requires that the polymer having a cyclic

structure comprise a carboxyl group, a hydroxy group, or an amino group, which are within the compositional limitations of functional groups recited in instant claim 24.

It would have been obvious for a person having ordinary skill in the art, in view of the subject matter recited in Application'729 to make and use a toner comprising a polyolefin having a cyclic structure comprising a copolymer as recited in the instant claims because that person would have had a reasonable expectation of successfully obtaining a toner capable of developing electrostatically charged images.

The recitation in instant claims 16 and 26 that the toner can be used for "developing an . . . image . . . wherein the . . . image is fixed using a heat roller fixing means" is a recitation of intended use, and does not distinguish the toner recited in the instant claims from the toners rendered obvious over the subject matter claimed in Application'729.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (703) 308-3625. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (703) 308-2464. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9311 (Rightfax) for after final faxes, and (703) 872-9310 for other official faxes.

Any inquiry of papers not received regarding this communication or earlier communications should be directed to

Application/Control Number: 09/000,330
Art Unit: 1756

Page 23

Supervisory Application Examiner Ms. Palestine Jenkins, whose telephone number is (703) 308-3521.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

JLD
May 7, 2003

Janis L. Dote
JANIS L. DOTE
PRIMARY EXAMINER
GROUP 1500
1700